ABSTRACT: The present invention provides a system and method for selectively acquiring and targeting online advertising inventory based on users' Internet Protocol (IP) addresses. In one aspect of the invention, Web publishers are made aware of IP addresses of interest, determined by matching attributes of current Internet users for whom IP addresses are known and targeting attributes of ad campaigns. Then, for each site visitor from one of said IP addresses, publishers choose whether to supply ad inventory to fulfill the immediate demand. Another aspect of the invention provides for targeting of online ads based on updated user IP addresses and some associated personal data provided by ISPs. An embodiment of the invention provides for a localized online advertising network in which ad inventory is selectively acquired from web sites, as required to fulfill immediate advertiser demand, and targeted by user zip code, as registered with users' ISPs.